



0074552

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

November 20, 2007

Mr. David A. Brockman, Manager
Richland Operations Office
United States Department of Energy
P.O. Box 550, MSIN: A7-50
Richland, Washington 99352

Ms. Shirley J. Olinger, Manager
Office of River Protection
United States Department of Energy
P.O. Box 450, MSIN: H6-60
Richland, Washington 99352

Mr. Pete J. Garcia Jr., Director
Safety and Engineering Division
United States Department of Energy
P.O. Box 550, MSIN: A5-17
Richland, Washington 99352

Mr. Charles G. Spencer, President
Washington Closure Hanford, LLC
2620 Fermi Avenue, MSIN: H4-24
Richland, Washington 99354

Ms. Jennifer L. Nuzum, Director
Environmental Protection
Fluor Hanford, Inc.
P.O. Box 1000, MSIN: H8-12
Richland, Washington 99352

Mr. William S. Elkins, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, H4-02
Richland, Washington 99354

Mr. Roby D. Enge, Director
Environment, Safety, Health and Quality
Pacific Northwest National Laboratory
P.O. Box 999, MSIN: K1-38
Richland, Washington 99352

Mr. Moussa N. Jaraysi, Vice President
Environmental Programs
CH2M HILL Hanford Group, Inc.
P.O. Box 1500, MSIN: H6-03
Richland, Washington 99352

Re: Final Decision to Modify the Integrated Disposal Facility (IDF) Dangerous Waste Permit

Dear Ladies and Gentlemen:

This letter notifies you of the Department of Ecology's final permit decision to modify the IDF Dangerous Waste Permit in Part III, Operating Unit 11, of the Hanford Facility's *Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste* (WA7 89000 8967).

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This modification incorporated the following changes into the IDF Permit:

1. The time between end-of-construction and 180 days prior to the first receipt of waste at the IDF will be referred to as the "Pre-Active Life" period, rather than the "Custodial Care" period. This is because the term "Custodial Care" is not defined in the Dangerous Waste Regulations while "Active Life" is defined. "Pre-Active Life" is a derivative of the term "Active Life," rather than a new term.
2. Chapters 6.0, will not be "Reserved," but will remain in the permit with the following modifications:
 - Various text changes required by the use of two inspection requirements tables - Table 6-2 during the Active Life period and Table 6-2A during the Pre-Active Life period.
 - Various text changes required to reflect the use of two sets of Preparedness and Prevention requirements – one for Pre-Active Life and one for Active Life.
 - Various text changes to reflect construction features that have been or are now installed rather than "will be" as currently stated in the permit.
3. Chapter 7.0 will not be "Reserved," but will remain in the permit with various text changes required by the use of two Contingency Plan Requirements tables – Table 7-1 for Pre-Active Life and Table 7-2 for Active Life.
4. Chapter 8.0 will not be "Reserved," but will remain in the permit in its present form.
5. Appendix 7A, the Building Emergency Plan, will not be "Reserved," but will remain in the permit with changes that are required to make it applicable to Pre-Active Life.
6. Appendix 7B will be added to the permit as a second Building Emergency Plan, applicable to Active Life.
7. Appendix 8A, the Training Plan, will be removed from the permit because it was included in the original permit in error.

Part III, Operating Unit 11 Unit-Specific Conditions were changed from those provided for public comment as follows:

1. References to "Custodial Care" have been removed and replaced with the term "Pre-Active Life" where applicable.
2. Chapters 6.0, 7.0, 8.0 and Appendix 7A are no longer shown as "Reserved" in Condition III.11.A. The title of Appendix 7A has text added to make it clear that it is the Building Emergency Plan for Pre-Active Life.
3. Appendix 7B, "Building Emergency Plan (As applicable in Chapter 7 – Active Life)" has been added to Condition III.11.A.

4. Appendix 8A in Condition III.11.A is being deleted because the actual training plan is not required to be in the permit. It was included in the permit in error.
5. Conditions III.11.B.5 through III.11.B.5.b have been modified to reflect different inspection requirements for Pre-Active Life and Active Life in Chapter 6.0.
6. Condition III.11.B.5.e.iii has been modified to require documentation that the flow meter has met Quality Assurance/Quality Control requirements and that the leachate transfer lines have been evaluated for freeze and thaw damage.

During the public comment period (April 23, 2007 through June 8, 2007) comments were received from four public citizens and the Oregon Department of Energy. Suggestions were received from the United States Environmental Protection Agency as well.

Comments are addressed in the enclosed Responsiveness Summary (Ecology Publication # 07-05-009) as required by Washington Administrative Code (WAC) 173-303-840(9).

The Responsiveness Summary and the IDF Dangerous Waste Permit are also available on the Ecology web site: www.ecy.wa.gov/biblio/nwp.html. Additional copies of the permit will be provided on CD-ROM, if requested.

The final permit modification package consists of the Responsiveness Summary and Part III, Operating Unit 11 revisions, which include changes to Permit Conditions, Chapters, and Appendices for the IDF permit. Please add or delete pages to your copy of the permit as indicated on the enclosed "Index For Page Changes."

In accordance with WAC 173-303-840(8)(b)(i), this permit modification is effective November 21, 2007.

You have a right to appeal this permit. To appeal you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the date of receipt of this document. Filing means actual receipt by the Board during regular office hours.
- Serve your appeal on the Department of Ecology within 30 days of the date of receipt of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). *Date of receipt* is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of (1) the permit you are appealing, and (2) the application for the permit.
- Serve and file your appeal in paper form. Electronic copies are not accepted.

Mr. David A. Brockman *et al.*
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1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

Deliver your appeal in person to:

The Pollution Control Hearings Board OR
P.O. Box 40903
Olympia, Washington 98504-0903

The Pollution Control Hearings Board
4224 6th Avenue Southeast
Rowe Six, Building 2
Lacey, Washington 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

Deliver your appeal in person to:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, Washington 98504-7608

The Department of Ecology
Appeals Coordinator
300 Desmond Drive Southeast
Lacey, Washington 98503

3. Send a copy of your appeal to:

Suzanne Dahl
Washington State Department of Ecology
Nuclear Waste Program
3100 Port of Benton Blvd
Richland, Washington 99354

If there are any questions, please contact Suzanne Dahl at 509-372-7892.

Sincerely,

James A. Hedger

Jane A. Hedges
Program Manager
Nuclear Waste Program

sd/pl1

Enclosures (12)

cc: See next page

Mr. David A. Brockman *et al.*
November 20, 2007
Page 5

cc electronic w/enc:

Nick Ceto, EPA
John Eschenberg, USDOE
Lori Huffman, USDOE
Gae Neath, USDOE
Tony McKarns, USDOE
Don Sommer, USDOE
William Taylor, USDOE

cc w/enc:

H-0-8
Administrative Record: HSWP-IDF
Environmental Portal
HF OR Gen. File
USDOE-ORP Correspondence Control
USDOE Reading Room

cc w/CD:

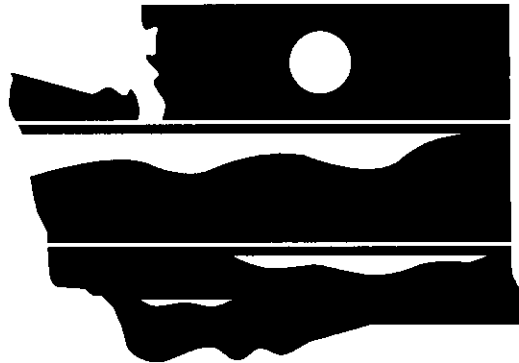
Dave Bartus, EPA
Gabriel Bohnee, NPT
Stuart Harris, CTUIR
Russell Jim, YN
Susan Leckband, HAB
Ken Niles, ODOE

cc w/o enc:

Richard Englemann, FH
Patrick Pettiette, WCH

Integrated Disposal Facility Pre-Active Life Permit Modification

Responsiveness Summary



WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

Department of Ecology
Nuclear Waste Program
3100 Port of Benton Blvd.
Richland, WA 99354
November 21, 2007
Publication Number: 07-05-009

RESPONSIVENESS SUMMARY

Prepared by:

Sterling L Derrick

Washington State Department of Ecology

Nuclear Waste Program

November 21, 2007]

Publication Number: 07-05-009

If you need this publication in an alternate format, please call the Nuclear Waste Program at 509-372-7950. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Introduction

This responsiveness summary is a result of written comments the Washington State Department of Ecology (referred to hereafter as Ecology or Department) received on the proposed draft permit modification to the Hanford Facility Integrated Disposal Facility Permit. Ecology proposed a change to the permit to put it into a standby mode called "pre-active life." We define this as the time between the end of construction and 180 days before a facility receives waste. It is wise to put the IDF into standby because the U.S. Department of Energy will not put any wastes there for at least a few years. The proposed changes remove conditions that apply to active facilities and add conditions that apply to an inactive facility. The draft permit modification was available for public review and comment from April 23, 2007 through June 8, 2007.

This Responsiveness Summary will be part of the Hanford Facility Administrative Record. It is intended to address all the comments received and show how those comments were evaluated.

Responsiveness Summary

Ecology received the following comments, and has responded to each as follows:

COMMENTER

(via email April 24, 2007)

From: Shelley Cimon [<mailto:scimon@oregontrail.net>]
Sent: Tuesday, April 24, 2007 9:34 AM
To: Brown, Madeleine (ECY)
Subject: Re: IDF Comment Period started yesterday

Response: To put Hanford's Integrated Disposal Facility into standby mode

It makes sense to put the IDF facility into custodial care pending need for it's use.

I am wondering, though, if there has been any consideration of the need for cathodic protection within these burial grounds since large containers will be set in place and we will see hydrogen, a certain amount of void space and the potential for degradation of steel containers? Has this been examined as a potential tool for implementation in these burial grounds?

Thanks,

Shelley Cimon
1208 First Street
La Grande, Oregon 97850
(541) 963-0853

ECOLOGY RESPONSE

Ecology provides the following clarification:

Under WAC 173-303-830(3), Permit changes, "When a permit is modified, only the conditions subject to modification are reopened. All other aspects of the existing permit remain in effect for the duration of the unmodified permit." Although this comment is not pertinent to the proposed modifications, Ecology would like to provide the following clarification:

All waste containers placed into IDF must meet the Land Disposal Restriction (LDR) requirements in the Washington State's Dangerous Waste Regulations WAC 173-303-140 and the federal regulations 40 CFR 268. Cathodic protection is not a requirement for waste disposal in a landfill. Based upon the LDR regulations, the IDF waste acceptance criteria will prohibit disposal of free liquid and requires that all waste streams be solidified so dangerous waste cannot move into the underlying soil and ground water. Therefore in the case of the IDF, the waste matrix is primarily responsible for containment of the waste, not the container that the waste is placed into for disposal.

Modeling in support of the IDF low activity waste Disposal Authorization performed by the U.S. Department of Energy, does not credit the waste (immobilized low-activity waste generated by the Waste Treatment Plant and immobilized waste generated by the Demonstration Bulk Vitrification Project) containers as part of the waste containment system. In addition, waste placement engineering studies have evaluated container failure, void spaces, and waste strength to ensure the stability of the IDF final closure cap. Dangerous Waste Regulations WAC 173-303 requires that any landfill designed to dispose of dangerous waste include systems that ensure containment of the waste. The containment systems are the landfill liner, treatment of the waste, landfill closure cap, leachate collection and removal, and a ground water monitoring network.

Commenter

(via hand-written letter dated March 23, 2007)

Mr. Allan Panitch
P.O. Box 99387
Seattle, WA 98139

Re: Putting Hanfords Integrated Disposal Facility into Standby mode.

Re: Publication No. 06.05.022 (undated)

It would appear that there existed a contractual obligation for someone to have the IDF operational @ a time certain; which

And it would appear that there was/is another contract requiring a facility to be ready, by that time certain to start operations which would utilize the then ready IDF.

1. Because of the need to put the IDF into standby mode – additional costs will be incurred. Whose contracts must be changed and who will be charged with the additional costs?
2. When the standby mode is terminated who will bear the costs of “restoring the original permit conditions”?
3. It will be necessary to decontaminate the IDF of contaminants appearing during the standby period. Whose responsibility will this be?
4. What impact will this period of “standby” have on any life requirements and/or warranties in the original contracts now needing to be modified?

Aside from the above questions, it is almost impossible to “comment” on the content of the Ref. Publication when it doesn’t include needed reference to the contracts impacted and times involved.

Respectfully

(signed)

Allan Panitch

(via hand-written letter dated April 26, 2007)

Subject: Putting Hanfords Integrated Disposal Facility into standby mode,
Comment on

Sir:

It is difficult to respond because the “flyer” is unclear. Are we being asked to comment on existing obligations being changed? ie. are the contractual changes? If so, what does the “changes” clause say? What are the costs involved? What is the consideration offered? etc.

The whole matter, if contractual, or for that matter, a series or a portfolio of contracts becomes a legal matter between the parties and not amenable to comment by the public – except perhaps as a PR ploy.

Of the subject proposed action, what is, and what isn’t contractual?

Respectfully

(signed)

(unreadable)

Ecology Response

Ecology provides the following clarification:

Under WAC 173-303-830(3), Permit changes, "When a permit is modified, only the conditions subject to modification are reopened. All other aspects of the existing permit remain in effect for the duration of the unmodified permit." Although this comment is not pertinent to the proposed modifications, Ecology would like to provide the following clarification:

The U.S. Department of Energy and CH2M HILL Hanford Group, Inc. remain as the Permittees of the Integrated Disposal Facility (IDF). Therefore, they remain responsible to ensure that while IDF has been placed in a "pre-active life" phase, the IDF will be maintained and monitored to ensure that it retains the integrity of a permitted waste disposal facility. Because the IDF has not yet begun its official active life, waste disposal activities will not be conducted while it is in the pre-active life phase. Pre-active life costs for maintaining the IDF will be reduced by about a factor of 4 when compared to an operating facility. As a result of this permit change, significant savings will be realized to the taxpayers.

COMMENTER

(via email dated April 30, 2007)

From: Cochran, Tom [tcochran@nrdc.org]

Sent: Monday, April 30, 2007 7:34 AM

To: Derrick, Bud (ECY)

Subject: Classification of the map of the Integrated Disposal Facility

Dear Sir or Madam,

It is ridiculous that you withhold the topographic map of the Integrated Disposal Facility (IDF)

http://www.ecy.wa.gov/programs/nwp/pdf/IDF/07_Part%2011_11_Appendix%202A%20no%20OUO.pdf under a claim that it is "Official Use Only" The site is clearly visible and identifiable on Google Earth at 46 31 47N, 119 31 47W.

Tom Cochran

ECOLOGY RESPONSE

Ecology provides the following clarification:

Under WAC 173-303-830(3), Permit changes, "When a permit is modified, only the conditions subject to modification are reopened. All other aspects of the existing permit remain in effect for the duration of the unmodified permit." Although this comment is not pertinent to the proposed modifications, Ecology would like to provide the following clarification:

The IDF topographical map is not being withheld but the distribution is limited. Further, the IDF Permit states "This section has been identified as 'Official Use Only' (OUO) and is available to view by appointment at the Nuclear Waste Program Resource Center 3100 Port of Benton Blvd. Richland, Washington. Please call Valarie Peery at (509) 372-7920 for a viewing appointment." The "OUO" designation of maps or drawings that provide sensitive information for government owned and operated facilities is a requirement of the United States Department of Energy (DOE Order 471.3 Identifying and Protecting Official Use Only Information, July 2005). This requirement was established by the federal government as a result of events related to 9/11.

It is true similar information in the public domain (Google Earth) is not under the same constraints. However it should be noted that the information required for topographic maps under the Dangerous Waste Regulations is more detailed than what is available at Google Earth.

COMMENTER

(In a letter dated June 8, 2007)

Thomas M. Stoops LG/LHG
Siting Manager
Oregon Department of Energy
625 Marion St. NE
Salem, OR 97301-3737

Subject: Integrated Disposal Facility Permit Modification

Mr. Derrick,

The State of Oregon has reviewed the portions of the proposed permit modification and offers the following comments for your consideration during the revision of the permit placing the Integrated Disposal Facility (IDF) into custodial care.

As noted in the permit, there is an expectation that the operator must maintain and monitor this facility to verify the integrity of the constructed system. In light of this requirement, we encourage Ecology to add permit conditions that specify the information to be collected and presented during the custodial care period.

Ecology has a unique opportunity to collect system performance data prior to the placement of waste and we highly encourage Ecology to add permit conditions that make full use of this opportunity. The collected data would be expected to indicate any departures from the anticipated performance of IDF and to inform the "risk budget tool" analysis that Ecology has previously discussed in relation to the facility.

We concur that sampling frequency should be reduced to quarterly sampling of the groundwater beneath the facility. However, we do expect that the data from the monitoring system should be used to establish the seasonally variable baseline of groundwater flowing beneath the IDF, and that the analyte list be expansive so as to be comprehensive. We also expect regular sampling and analysis of the rainwater/leachate collected from the various sumps, along with establishment of several precipitation gauges around the perimeter of IDF. By collecting local precipitation data and rainwater/leachate volume data, the operator and regulator would be able to make better informed estimates on leakage through the various liner systems. Since the Subsurface Liquids Monitoring and Operation Plan is being suspended until 180 days prior to operations, we recommend that a custodial liquids monitoring and operations plan be created.

Lastly we would request that all collected data be made available no less than quarterly so as to provide concerned stakeholders and the regulatory community an opportunity to engage in operational changes, if any are identifies.

Thank you for the opportunity to comment and if you require any clarification of these comments, please contact me via phone or email.

Sincerely,

(signed)

Thomas M. Stoops, LG/LHG
Siting Manager

ECOLOGY RESPONSE

Ecology disagrees as discussed below.

The commenter had several points we summarize as follows:

- 1. Encourages Ecology to add permit conditions that would require information to be collected during custodial care, and that would be used in the analysis conducted for the risk budget tool;*
- 2. "Concur that sampling frequency should be reduced to quarterly sampling"; and, that data from monitoring be used*

to establish seasonal variability baseline of groundwater flow beneath IDF

3. Sampling and analysis of rainwater/leachate collected from sumps along with the establishment of precipitation gauges around the perimeter of IDF. Use the data to evaluate leakage through the liners.
4. Create a custodial liquids monitoring and operations plan.
5. Make all collected data available no less than quarterly to stakeholders.

Under WAC 173-303-830(3), Permit changes, "When a permit is modified, only the conditions subject to modification are reopened. All other aspects of the existing permit remain in effect for the duration of the unmodified permit." Although for the most part this comment is not pertinent to the proposed modifications, Ecology would like to provide the following clarification:

In response to item 1, only the submittal date for the initial Risk Budget Tool is being modified. As indicated in the Permit modification, the date for this modeling tool is now based on the release date for the Final Tank Closure and Waste Management EIS. The existing Permit condition requires Ecology to review the risk budget modeling assumptions, input parameters, and results. Further, Permit condition III.11.I.5.a, specifies in detail the input for the initial risk budget tool that is required before placement of waste in the IDF. Additionally, the permit condition does require regular updates to the risk budget tool. We think that the information requested by the commenter in this item is already required for this modeling tool.

In response to item 2, Ecology's modification of the IDF Permit does not propose any changes in the existing Unit 11 permit condition III.11.E Ground Water and Ground Water Monitoring conditions. Unit 11 permit condition III.11.E.1.a already specifies a required analyte list for the IDF to establish a background baseline. Also, Unit 11 permit condition III.11.E.1.b requires Ecology and the Permittee to assess and revise the analyte list based on analysis of the IDF background monitoring. Further, Unit 11 permit condition III.11.E.1.c requires periodic review and revision on the analyte list as needed. Please note that these conditions remain in effect and are not altered by the proposed modification.

IDF Unit 11 permit condition III.11.E.1.a already includes a requirement for establishing the hydrogeologic characteristics of the aquifer. Further, as specified by this Permit condition, Chapter 5.0, Section 5.5.4.6 (ground water monitoring plan for the IDF) requires that the "Groundwater flow rate and flow direction at the IDF site will be determined annually." These data are included in the annual groundwater monitoring report.

In response to item 3, the Hanford meteorological monitoring station network monitors precipitation for the IDF site area. Ecology has not proposed changes to the meteorological monitoring network as a part of the proposed Permit modification. The Hanford Meteorological Station (HMS) is operated by the Pacific Northwest National Laboratory for the United States Department of Energy. HMS network data is available on-line at <http://hms.pnl.gov/hms.htm>. No additional monitoring is planned.

In response to sampling rainwater at the IDF facility Custodial Care permit condition III.11.B.5.d, Rainwater Management requires that such water be managed in accordance with the pollution prevention and best management practices required by State Waste Discharge Permit Number ST 4511. No additional actions are planned beyond the requirements of the applicable discharge permit.

Ecology believes that the IDF Permit in the modified Permit condition III.11.B.5.e.vi, requires the Permittees to monitor the liquid levels in the Leachate Collection and Removal System (LCRS) and the Leak Detection System (LDS) sumps to ensure the action leakage rate is not exceeded. Monitored liquid levels will be recorded and evaluated, and are maintained in the IDF Operating Record, Hanford Facility RCRA Permit condition II.I.

In response to item 4, Ecology believes that the current reporting requirements for the IDF Unit 11 Permit conditions are sufficient to demonstrate compliance, and does not feel that additional reports are needed at this time. Ecology can work with the IDF Permittees to obtain data from the IDF Operating Record, should stakeholders have an interest in reviewing this data. No further action will be taken for this item.

In response to item 5, IDF Unit 11 Permit condition III.11.E.1.e, requires an annual groundwater monitoring report be provided to Ecology by March 1 of each year, and this is consistent with Hanford Site-wide monitoring requirements for other permitted activities. Where applicable, Ecology may also receive quarterly monitoring reports. These reports and any other data required to satisfy IDF Unit 11 permit conditions are available upon request.

COMMENTER

(via email dated April 1, 2007)

From: Eric Watson [mailto:smokinjo29@yahoo.com]

Sent: Sunday, April 01, 2007 1:19 PM

To: Brown, Madelein (ECY)

Subject: Re: New dates for comment period for the IDF permit change

Nuclear waste should be reduced to a non hazardous material in which to dispose of. There is no reason that any material cannot be discharged or disposed of. All materials that are a potential hazard to society should not be made regardless how good it is at the current time for society. This should have been thought of before the radioactive waste came. Now you want to pollute our world with toxic waste in areas that will hold it for years. Nothing tells the future of what becomes of it 20, 40, Or 100 years from now. Maybe a new war invention may come up and that could be a link to our disaster.

How about disposing of the material in the lava in some time where radiation is a common thing. Don't pollute our unpolluted land with your toxic waste. It makes no sense, no reason, or no rhyme to leave it for disasters in the future.

ECOLOGY RESPONSE

Ecology provides the following clarification:

Under WAC 173-303-830(3), Permit changes, "When a permit is modified, only the conditions subject to modification are reopened. All other aspects of the existing permit remain in effect for the duration of the unmodified permit." Although this comment is not pertinent to the proposed modifications, Ecology would like to provide the following clarification:

Unfortunately, the technology does not currently exist to convert radioactive waste to non-radioactive waste or to safely dispose of the waste in lava.

SUGGESTIONS FROM EPA

In a letter dated June 8, 2007 to Jay Manning, Director, Washington State Department of Ecology (Ecology), from Richard Albright, Director, Office of Air, Waste and Toxics, Environmental Protection Agency (EPA), Region 10, EPA suggested that certain changes be made to the permit modification. Based on these suggestions, Ecology made the following changes:

1. The time between end-of-construction and 180 days prior to the first receipt of waste at the IDF will be referred to as the "Pre-Active Life" period rather than the "Custodial Care" period. This is because the term "Custodial Care" is not defined in the Dangerous Waste regulations while "Active Life" is defined. "Pre-Active Life" is a derivative of the term "Active Life", rather than a new term.
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- Various text changes required to reflect the use of two sets of Preparedness and Prevention requirements – one for Pre-Active Life and one for Active life.
 - Various text changes to reflect construction features that have been or are now installed rather than “will be” as currently stated in the permit.
3. Chapter 7.0 will not be “Reserved” but will remain in the permit with various text changes required by the use of two Contingency Plan Requirements tables – Table 7-1 for Pre-Active Life and Table 7-2 for Active Life.
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 5. Appendix 7A, the Building Emergency Plan, will not be “Reserved” but will remain in the permit with changes that are required to make it applicable to Pre-Active Life.
 6. Appendix 7B will be added to the permit as a second Building Emergency Plan, applicable to Active Life.
 7. Appendix 8A, the training plan, will be removed from the permit because it was included in the original permit in error.

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1. References to “Custodial Care” have been removed and replaced with the term “Pre-Active Life” where applicable.
2. Chapters 6.0, 7.0, 8.0 and Appendix 7A are no longer shown as “Reserved” in Condition III.11.A. The title of Appendix 7A has text added to make it clear that it is the Building Emergency Plan for Pre-Active Life.
3. Appendix 7B, “Building Emergency Plan (As applicable in Chapter 7 – Active Life)” has been added to Condition III.11.A
4. Appendix 8A in Condition III.11.A is being deleted because the actual training plan is not required to be in the permit. It was included in the permit in error.
5. Condition III.11.B.5 through III.11.B.5.b have been modified to reflect different inspection requirements for pre-active life and active life in Chapter 6.0.

Legal Notice Mailed April 18, 2007 – Part 2

How can I make a comment?

Send all comments in writing, by Friday, June 8, 2007, to:

Sterling L. Derrick
Washington State Department of Ecology
3100 Port of Benton Blvd
Richland, WA 99354
509-372-7971 fax
Sder461@ecy.wa.gov

Ecology has not scheduled a public hearing. To request a hearing, contact Madeleine Brown at 509-372-7936 or mabr461@ecy.wa.gov.

The public comment period runs from **April 23 to June 8, 2007**. Ecology will consider all comments it receives during this period. Ecology will issue a response to comments when it issues the final decision on the permit change.

How can you review the permit?

You can review the draft permit modification at the Hanford Public Information Repositories. To make an appointment to review the information at Ecology's Nuclear Waste Program Richland office, call 509-372-7920. Review the draft permit online at <http://www.ecy.wa.gov/programs/nwp/commentperiods.htm>.

HANFORD PUBLIC INFORMATION REPOSITORIES

Portland

Portland State University
Branford Price Millar Library
1875 SW Park Ave.
Attn: Don Frank 503-725-4132

Richland

U.S. Department of Energy Reading Room
Consolidated Information Center, Room 101-L
2770 University Dr.
Attn: Janice Parthre 509-372-7443

Seattle

University of Washington
Suzzallo Library
Government Publications Division
Attn: Eleanor Chase 206-543-4664

Spokane

Gonzaga University
Foley Center
502 E. Boone Ave.
Attn: Linda Pierce 509-323-3834

If you need this publication in an alternate format, please call the Nuclear Waste Program at 509-372-7950. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Public Comment Period

April 23 through June 8, 2007 (NEW DATES)

To put Hanford's Integrated Disposal Facility into a standby condition

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY
Nuclear Waste Program
3100 Port of Benton Blvd.
Richland, WA 99354



For more information call
Hanford cleanup toll-free
line 800-321-2008.
7561 4/22

**REQUEST FOR
PROPOSAL**
Medical Insurance Broker
The Franklin County Board
of Commissioners is
soliciting proposals for
qualified insurance firms

1675 Park Ave SW
 Astoria, OR 97103
 Phone: 503-725-4132
 Fax: 503-725-4132
 Mr. J. Richard
 Director, Department of Energy
 Reading Room
 Consolidated Information
 Center, Room 101-1272
 University of Idaho
 Attn: Janice Fairhead
 500-372-7443
 Seattle
 University of Washington
 Seattle Library
 Government Publications
 Division
 Attn: Eleanor Chase
 Phone: 206-543-4904
 Spokane
 Gonzaga University Policy
 Center
 Mr. E. Boone
 Attn: Linda Pierce
 500-323-3834
 If you want to ask for a
 public hearing, check for a
 notice in the Astorian Brown
 Nuclear Waste Program, 3100
 Port of Benton Blvd., Rich-
 land, WA 99154.
 Call 509-925-5900 for
 more information call the
 Hanford cleanup toll-free
 line 800-521-2008.
 7561-4122

**REQUEST FOR
 PROPOSAL**
 Medical Information Benefits
 The Washington County Board
 of Commissioners is re-
 questing proposals from
 qualified insurance firms to
 provide a proposal for
 medical insurance and



Legal Notice Mailed April 18, 2007 – Part 1

Public Comment Period

To put Hanford's Integrated Disposal Facility into standby mode

April 23, through June 8, 2007 (NEW DATES)

The Washington State Department of Ecology invites you to comment on a proposed change to Hanford's Integrated Disposal Facility (IDF) permit. The change will put the IDF into a standby mode called "custodial care."

What is a "custodial care" phase?

Ecology defines this as the time between the end of construction and 180 days before a facility receives waste.

The IDF is a landfill at Hanford for low-activity mixed wastes. (Mixed wastes have both radioactive and dangerous chemicals.) It is wise to put the facility into standby because the U.S. Department of Energy will not put any wastes there for at least a few years.

Some conditions in the IDF's permit apply to active facilities. The proposed changes to the permit remove those conditions and add ones that apply to an inactive facility.

Why are no wastes going to the facility?

The permit only allows disposal of glass waste from bulk vitrification, low-activity glass from the Waste Treatment Plant, and dangerous waste resulting from IDF's operations. The bulk vitrification demonstration is delayed. It will be years before the waste treatment plant makes any low-activity waste glass to be buried there. No other wastes can be disposed of in the facility until after an environmental study is done in 2009.

Washington Administrative Code (173-303-040) defines the active life of a facility as "the period from the initial receipt of dangerous waste... until the department receives certification of final closure."

The IDF has not yet begun its official active life.



When will the custodial care phase end?

When Hanford is ready to send waste to the IDF, the IDF will need to resume active life. It will take about six months to make the IDF ready to receive waste after the custodial care phase ends. When the Permittees are ready to resume the IDF's active life, Ecology will restore all the original permit conditions.

IDF Permittees

Owner/Operator: The U.S. Department of Energy, Office of River Protection and Richland Operations Office, P.O. Box 550, Richland, WA, 99352

Co-operator: CH2M HILL, Hanford Group, 2440 Stevens Center Place, Richland, WA, 99354.

What parts of the facility's permit would change?

The permit changes are as follows:

- The permit conditions for training and for handling emergencies would change to reflect that there is no waste in the facility.
- The Permittees would inspect, monitor, and collect sump liquids, plus after storms.
- Ecology would add a permit condition that defines sump liquids as rain water.
- Ecology will add a condition requiring deficiencies noted during inspections to be corrected within 90 days.
- The proposed changes extends the deadline for the Permittees to submit key documents such as the risk budget tool. (The risk budget tool will model future impacts of planned IDF waste forms and their impact to the ground and groundwater.) The Permit requires submittal of this document before receipt of waste in the IDF until Ecology approves the risk budget tool.

How can I learn more about the changes?

The draft permit application and its statement of basis (a summary) are available online at <http://www.ecy.wa.gov/programs/nwp/commentperiods.htm>. To review the draft permit changes at Ecology's Nuclear Waste Program Office, call 509-372-7920. You can also review the proposal at Hanford's Public Information Repositories, listed on reverse.

6. Condition III.11.B.5.e.iii has been modified to require documentation that the flow meter has met QA/QC requirements and that the leachate transfer lines have been evaluated for freeze and thaw damage.

Summary of Public Involvement Actions

Public involvement activities were as follows:

- **Formal public comment period** – Ecology held a 45-day comment period from April 23 through June 8, 2007.
- **Public notice** – Ecology wrote and sent a focus sheet (attached) to the Hanford mail list, which has about 900 names. It was posted on The Nuclear Waste Program's web site and emailed to the HanfordInfo listserv (about 600 names) at the start of the comment period.
- **Radio notice** – Ecology purchased air time on KONA radio on the day the comment period started.
- **Legal notice** – Ecology purchased a legal classified ad in the Tri-City Herald on Sunday, April 22 to announce the start of the comment period (attached).
- **Information repositories** – The focus sheet, statement of basis, and proposed permit changes were available at the Nuclear Waste Program office in Richland and at Hanford's four information repositories (in Richland, Spokane, and Seattle, Washington and Portland, Oregon)
- **Stakeholder notifications** – Ecology sent an advance notice to the listserv. and announced the proposed changes at Hanford Advisory Board meetings and Committee meetings. It was discussed at the December 7, 2006 meeting of the Hanford Public Interest Group Network. Ecology also announced the comment period in a public involvement look-ahead report shared with stakeholders and published on the Department of Energy's web site as well as Ecology's Nuclear Waste Program web site.

Ecology initially planned to start the comment period on April 2, and mailed a notice out to arrive in mailboxes just before that date. When it was realized that the comment period needed to be postponed, Ecology sent an email to the listserv (attached) announcing that the start of the comment period had been delayed until April 23rd.

Attachments

Legal notice mailed April 18, 2007

Legal classified ad from April 22, 2007 Tri-City Herald

Radio ad text

Listserv notification of comment period revised dates

Public Comments

Radio Ad Text

Washington State's Department of Ecology invites you to comment on proposed changes to the unit-specific permit for Hanford's Integrated Disposal Facility. That's the new landfill that will take low-activity radioactive wastes from Hanford's bulk vitrification tests.

The proposed changes reflect the fact that no waste will come to this landfill for a few years. So the changes would remove conditions that apply to an "active" facility and add those that apply to inactive ones.

A public comment period runs from April 23 through June 8, 2007. Ecology will consider all comments it gets in this period.

You can review the proposed changes at the Hanford Public Information Repositories. You can review the information at Ecology's Nuclear Waste Program office. You also can review the draft permit online.

For more information call the toll-free Hanford cleanup line, 800-321-2008.

That's 800-321-2008.

Listserv Notification of Comment Period Revised Dates

From: "Brown, Madeleine (ECY)" <mabr461@ECY.WA.GOV>
To: HANFORD-INFO@LISTSERV.WA.GOV
Sent: Tuesday, March 27, 2007 9:22:23 AM
Subject: New dates for comment period for the IDF permit change

This is a message from the Washington State Department of Ecology

Public Comment Period *Revised dates: April 23 through June 8, 2007*

The comment period for the changes to the permit for the Integrated Disposal Facility will begin April 23, 2007. The change will put the IDF into a standby mode called "custodial care." Ecology defines this as the time between the end of construction and 180 days before waste starts to go there.

The IDF is a landfill at Hanford for low-activity mixed wastes. (Mixed wastes have both radioactive and dangerous chemicals.) It is wise to put the IDF into standby because no wastes will go there for at least a few years.

Washington's regulations define the active life of a facility as "the period from the initial receipt of dangerous waste...until the department receives certification of final closure." The IDF has not yet begun its official active life.

Some conditions in the IDF's permit apply to active facilities. The proposed changes remove those conditions and add ones that apply to an inactive facility.

How can I learn more about the changes? On April 23, the draft permit application and its statement of basis (a summary) will be available online at <http://www.ecy.wa.gov/programs/nwp/commentperiods.htm>. They also will be in Ecology's Nuclear Waste Program Office and at Hanford's Public Information Repositories.

PUBLIC COMMENT – SHELLEY CIMON

-----Original Message-----

From: Shelley Cimon [mailto:scimon@oregontrail.net]

Sent: Tuesday, April 24, 2007 9:34 AM

To: Brown, Madeleine (ECY)

Subject: Re: IDF Comment Period started yesterday

Response: To put Hanford's Integrated Disposal Facility into standby mode

It makes sense to put the IDF facility into custodial care pending need for it's use.

I am wondering, though, if there has been any consideration of the need for cathodic protection within these burial grounds since large containers will be set in place and we will see hydrogen, a certain amount of void space and the potential for degradation of steel containers? Has this been examined as a potential tool for implementation in these burial grounds?

Thanks,

Shelley Cimon
1208 First Street
La Grande, Oregon 97850
(541) 963-0853

PUBLIC COMMENT – ALLAN PANITCH



Seattle, WA 98139

Central Files _____

File Name: _____

Cross Reference: _____

23 March 04

Mr Sterling L. Derruck
Wash St. Dept of Ecology
3100 Port of Benton Blvd
Richland, Wa 99354

COPY FOR YOUR
INFORMATION

RECEIVED

MAR 28 2007

Department of Ecology
NWP - Richland

Re: Putting Hanfords Integrated Disposal
Facility into standby mode.

Re: Publication No. 06.05.022 (undated)

It would appear that there existed a
contractual obligation for someone to have
the IDF operational @ a time certain;
which

And it would appear that there was/is
another contract requiring a facility to be
ready, by that time certain to start operations
which would utilize the then ready IDF.

1. Because of the need to put the IDF into
standby mode - additional costs
will be incurred. Whose contracts
must be changed and who will be
charged with the additional costs?
2. When the standby mode is terminated
who will bear the costs of "restoring
the original permit conditions"?

3. It will be necessary to decontaminate the IDF of contaminants appearing during the standby period.
Whose responsibility will this be?

4. What impact will this period of "standby" have on any life requirements and/or warranties in the original contracts now needing to be modified?

Aside from the above questions, it is almost impossible to "comment" on the content of the Ref. publication when it doesn't include needed reference to the contracts impacted and times involved.

Respectfully

Allen Paul

PUBLIC COMMENT - ALLAN PANITCH



Mr. Allan Panitch
P.O. Box 99387
Seattle, WA 98139-0387

April 26, '07

Washington State Department of Ecology
3100 Port of Benton Blvd
Richland, Wa 99354

COPY FOR YOUR INFORMATION
Central File Cross-Reference

Attn: Mr. Sterling L. Derrick

RECEIVED

APR 30 2006

Subject: Putting Hanford's Integrated Disposal Facility into a stand by mode, Comment on

Sir:

It is difficult to respond because the "flip" is unclear. Are we being asked to comment on existing obligations being changed? i.e. are the contractual changes? If so, what does the "changes" clause say? What are the costs involved? What is the consideration offered? etc.

The whole matter, if contractual, or for that matter, a series or a portfolio of contracts becomes a legal matter between the parties and not amenable to comment by the public - except perhaps as a PR ploy.

Of the Subject proposed action, what is, and what isn't contractual?

Respectfully
Allan Panitch

PUBLIC COMMENT – TOM COCHRAN

Derrick, Bud (ECY)

From: Cochran, Tom [tcochran@nrdc.org]
Sent: Monday, April 30, 2007 7:34 AM
To: Derrick, Bud (ECY)
Subject: Classification of the map of the Integrated Disposal Facility.

Dear Sir or Madam,

It is ridiculous that you withhold the topographic map of the Integrated Disposal Facility (IDF) http://www.ecy.wa.gov/programs/nwp/pdf/IDF/07_Part%20III_11_Appendix%20A%20no%20OUO.pdf under a claim that it is "Official Use Only". The site is clearly visible and identifiable on Google Earth at 46 31 47N, 119 31 47W.

Tom Cochran

PUBLIC COMMENT – THOMAS M. STOOPS



Oregon

Theodore R. Kulongoski, Governor



OREGON DEPARTMENT OF ENERGY

625 Marion St. NE
Salem, OR 97301-3737

Phone: (503) 378-4040

Toll Free: 1-800-221-8035

FAX: (503) 378-4040

www.oregon.gov/energy

File Number: _____
Cross Reference: _____

June 8, 2007

**COPY FOR YOUR
INFORMATION**

RECEIVED

JUN 11 2007

Department of Ecology
NWP - Richland

Sterling L. Derrick
Washington State Department of Ecology
3100 Port of Benton Blvd
Richland, WA 99354
509-372-7971 fax
Sder461@ecy.wa.gov

Subject: Integrated Disposal Facility Permit Modification

Mr. Derrick,

The State of Oregon has reviewed portions of the proposed permit modification and offers the following comments for your consideration during the revision of the permit placing the Integrated Disposal Facility (IDF) into custodial care.

As noted in the permit, there is an expectation that the operator must maintain and monitor the facility to verify the integrity of the constructed system. In light of this requirement, we encourage Ecology to add permit conditions that specify the information to be collected and presented during the custodial care period. Ecology has a unique opportunity to collect system performance data prior to the placement of waste and we highly encourage Ecology to add permit conditions that make full use of this opportunity. The collected data would be expected to indicate any departures from the anticipated performance of IDF and to inform the "risk budget tool" analysis that Ecology has previously discussed in relation to the facility.

We concur that sampling frequency should be reduced to quarterly sampling of the groundwater beneath the facility. However, we do expect that the data from the monitoring system should be used to establish the seasonally variable baseline of groundwater flowing beneath the IDF, and that the analyte list be expansive so as to be comprehensive. We also expect regular sampling and analysis of the rainwater/leachate collected from the various sumps, along with establishment of several precipitation gauges around the perimeter of IDF. By collecting local precipitation data and rainwater/leachate volume data, the operator and regulator would be able to make better informed estimates on leakage through the various liner systems. Since the Subsurface Liquids Monitoring and Operation Plan is being suspended until 180 days prior to operations, we recommend that a custodial liquids monitoring and operations plan be created.

Lastly we would request that all collected data be made available no less than quarterly so as to provide concerned stakeholders and the regulatory community an opportunity to engage in operational changes, if any are identified.

Thank you for the opportunity to comment and if you require any clarification of these comments, please contact me via phone or e-mail.

Sincerely,

Thomas M. Stoops, LG/LHG
Siting Manager

PUBLIC COMMENT – ERIC WATSON

From: Eric Watson [mailto:smokinjo29@yahoo.com]

Sent: Sunday, April 01, 2007 1:19 PM

To: Brown, Madeleine (ECY)

Subject: Re: New dates for comment period for the IDF permit change

Nuclear waste should be reduced to a non hazard material in which to dispose of. There is no reason that any material cannot be discharged or disposed of. All materials that are a potential hazard to society should not be made regardless how good it is at the current time for society. This should have been thought of before the radioactive waste came. Now you want to pollute our world with toxic waste in areas that will hold it for years. Nothing tells the future of what becomes of it 20, 40, Or 100 years from now. Maybe a new war invention may come up and that could be a link to our disaster.

How about disposing of the material in the lava in some time where radiation is a common thing. Don't pollute our unpolluted land with your toxic waste. It makes no sense, no reason, or no rhyme to leave it for disasters in the future.

Index For Page Changes

Modification to IDF Permit, WA7890008967, Part III Operating Unit 11

November 21, 2007

Pages To Remove

Remove Unit-Specific Conditions dated
December 31, 2006 – All Pages

Remove Chapter 6, Rev 0 dated April 9,
2006 – All Pages.

Remove Chapter 7.0, Rev.0 dated, April
9, 2006 – All Pages

Remove Appendix 7A, Rev 0 dated
April 9, 2006 – All Pages

Remove Appendix 8A, Rev 0 dated
April 9, 2006 – All Pages

Pages To Insert

Insert Unit-Specific Conditions Page
Revision Log dated November 21, 2007.

Insert Unit Specific Conditions dated
November 21, 2007 – All Pages

Insert Chapter 6.0 Page Revisions Log
dated November 21, 2007.

Insert Chapter 6.0, Rev 1.0, dated
November 21, 2007 – All Pages

Insert Chapter 7.0 Page Revisions Log
dated November 21, 2007.

Insert Chapter 7.0, Rev 1.0, dated
November 21, 2007 – All Pages

Insert Appendix 7A Page Revisions Log
dated November 21, 2007.

Insert Appendix 7A, Rev 0 dated
November 21, 2007 – All Pages

Insert Appendix 7B Page Revisions Log
dated November 21, 2007.

Insert Appendix 7B, Rev 0 dated
November 21, 2007 – All Pages

Integrated Disposal Facility

Operating Unit 11, of the Hanford Facility's *Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste* (WA7890008967).

Integrated Disposal Facility Unit-Specific Conditions

PAGE REVISION LOG

IDF Unit-Specific Conditions Revision and Date	Pages Replaced	Change Description	Ecology Approval Date
Revision 1.0 November 21, 2007	Replaced all pages	Modifications required to put IDF into Pre-Active Life Operating mode.	November 21, 2007

Notes

- 1) Insert this log sheet before the Table of Contents.
- 2) Insert the revised pages in the appropriate places in the IDF Permit.

PART III, OPERATING UNIT 11 UNIT-SPECIFIC CONDITIONS**Integrated Disposal Facility**

This document sets forth the operating conditions for the Integrated Disposal Facility (IDF).

III.11.A COMPLIANCE WITH APPROVED PERMIT

The Permittees shall comply with all requirements set forth in the Integrated Disposal Facility (IDF) Permit conditions, the Appendices specified in condition III.11.A and the Amendments specified in Condition III.11.B through III.11.I. All subsections, figures, and tables included in these portions are enforceable unless stated otherwise:

OPERATING UNIT 11, ATTACHMENT 52:

Chapter 1.0 Part A Form, Revision 3, dated March 2005

Chapter 2.0 Topographic Map Description

Chapter 3.0 Waste Analysis Plan

Chapter 4.0 Process Information

Chapter 5.0 Ground Water Monitoring

Chapter 6.0 Procedure to Prevent Hazards

Chapter 7.0 Contingency Plan

Chapter 8.0 Personnel Training

Chapter 11.0 Closure and Post Closure Requirements

Chapter 13.0 Other Federal and State Laws

Appendix 4A Design Report (as applicable to critical systems), Class 1 modification dated December 31, 2006

Appendix 4B Construction Quality Assurance Plan

Appendix 4C Response Action Plan

Appendix 4D Technical specifications document (RPP-18-489 Rev 0), Class 1 modification dated December 31, 2006

Appendix 7A Building Emergency Plan – ~~Pre-Active Life~~ (As applicable in Chapter 7)

~~Appendix 7B Building Emergency Plan – Active Life~~

~~Appendix 8A Training Plan~~

General and Standard Hanford Facility RCRA Permit, WA7890008967 (Permit) conditions (Part I and Part II Conditions) applicable to the IDF are identified in Permit Attachment 3 (Permit Applicability Matrix).

III.11.B AMENDMENTS TO THE APPROVED PERMIT

III.11.B.1 Portions of Permit Attachment 4, Hanford Emergency Management Plan that are not made enforceable by inclusion in the applicability matrix for that document, are not made

- 1 enforceable by reference in this document.
- 2 III.11.B.2 Permittees must comply with all applicable portions of the Permit. The facility and unit-
3 specific recordkeeping requirements are distinguished in the General Information Portion
4 of the Permit, and are tied to the Permit conditions.
- 5 III.11.B.3 The scope of this Permit is restricted to the landfill construction and operation as
6 necessary to dispose of: 1) immobilized low activity waste from the WTP, and 2) the
7 Demonstration Bulk Vitrification System and IDF operational waste as identified in
8 Chapter 4.0. Future expansion of the RCRA trench, or disposal of other wastes not
9 specified in this Permit, is prohibited unless authorized via modification of this Permit.
- 10 III.11.B.4 In accordance with WAC 173-303-806(11)(d), this Permit shall be reviewed every five (5)
11 years after the effective date and modified, as necessary, in accordance with WAC 173-
12 303-830(3).
- 13 **III.11.B.5 Inspection Requirements – Pre-Active Life Period and Active Life Period**
- 14 III.11.B.5.a The Permittees will conduct inspections of the IDF according to the following
15 requirements:
- 16
- 17 III.11.B.5.a.i Prior to the start of the active life of the IDF as defined in WAC 173-303-040, according
18 to Table 6.2 of Chapter 6.0 .
- 19
- 20 III.11.B.5.a.ii Following the start of the active life of the IDF as defined in WAC 173-303-040,
21 according to Table 6.2A of Chapter 6.0.
- 22
- 23 III.11.B.5.b The Permittees will remedy any problems revealed by inspections conducted pursuant to
24 permit condition III.11.B.5(a) on a schedule which prevents hazards to the public health
25 and the environment and as agreed to in writing by Ecology. Where a hazard is imminent
26 or has already occurred, remedial action must be taken immediately.
- 27
- 28 III.11.B.5.c Reserved
- 29 III.11.B.5.d Rainwater Management
- 30 Prior to the start of the active life of the IDF, the Permittees will manage the discharge of
31 such water in accordance with the pollution prevention and best management practices
32 required by State Waste Discharge Permit Number ST 4511.
- 33 III.11.B.5.e Management of Liquids Collected in the Leachate Collection and Removal System
34 (LCRS), Leak Detection System (LDS), and Secondary Leak Detection System (SLDS)
35 prior to the start of the active life of the IDF.
- 36 III.11.B.5.e.i Permittees shall manage the liquid in the LCRS system in a manner that does not allow
37 the fluid head to exceed 30.5 cm above the flat 50-foot by 50-foot LCRS sump HDPE
38 bottom liner, and the LCRS sump trough, except for storms that exceed the 25-year,
39 24-hour storm event [(WAC 173-303-665(2)(h)(ii)(B). Liquid with a depth greater than
40 30.5 cm above the LCRS liner will be removed at the earliest practicable time after
41 detection (not to exceed 5 working days).
- 42 III.11.B.5.e.ii Accumulated liquid of pumpable quantities in the LDS and SLDS will be managed in a
43 manner that does not allow the fluid head to exceed 30.5 cm above the LDS liner or SLDS
44 liner [WAC 173-303-665(2)(h)(i)(C)(iii)]. Liquid with a depth greater than 30.5 cm
45 above a liner will be removed at the earliest practicable time after detection (not to exceed
46 5 working days).

III.11.B.5.e.iii The Permittees will use a flow meter to check if the amount of actual liquid pumped corresponds to the amount accumulated in the leachate collection tank to verify the proper function of the leachate collection and removal sump pumps with each use. The Permittees will document in the IDF portion of the facility operating record appropriate quality assurance/quality control requirements for selection and operation of the flow meter based on the required verification. In addition, the Permittees will evaluate the leachate transfer lines for freeze and thaw damage when ambient conditions may cause such damage to occur. The Permittees will document the methods and criteria used for purposes of this evaluation, along with an appropriate justification.

III.11.B.5.e.iv The Permittee will inspect for liquids after significant rainfall events.

III.11.B.5.e.v The Permittee will annually verify monitoring gauges and instruments are in current calibration; calibration will be performed annually or more frequently at intervals suggested by the manufacturer (refer to Chapter 4.0, §4.3.7.4)

III.11.B.5.e.vi The Permittees will monitor liquids in the Leachate Collection and Removal System and Leak Detection System to ensure the action leakage rate (Chapter 4.0, Appendix 4A) is not exceeded. The Leachate Collection and Removal System will be inspected per Condition III.11.B.5.c.

III.11.B.5.f Soil Stabilization

Prior to the first placement of waste in the IDF, the Permittee will apply soil stabilization materials as needed to prevent soil erosion in and around the landfill.

III.11.C DESIGN REQUIREMENTS

III.11.C.1 IDF is designed in accordance with WAC 173-303-665 and WAC 173-303-640 as described in Chapter 4.0. Design changes impacting IDF critical systems shall be performed in accordance with Conditions III.11.D.1.d.i and III.11.D.1.d.ii.

IDF Critical Systems¹ include the following: The leachate collection and removal system (LCRS), leachate collection tank (LCT), leak detection system (LDS), liner system (LS), and closure cap. H-2 Drawings for the LCRS, LCT, LDS, and LS are identified in Appendix 4A, Section 3 of this Permit. Drawings for the closure cap will be provided pursuant to Condition III.11.C.1.b.

III.11.C.1.a The Permittees shall construct and operate the IDF in accordance with all specifications contained in RPP-18489 Rev 0. Critical systems, as defined in the definitions section of the Site-Wide RCRA Permit, are identified in Appendix 4A, Section 1 of this Permit.

III.11.C.1.b Landfill Cap

At final closure of the landfill, the Permittees shall cover the landfill with a final cover (closure cap) designed and constructed [WAC 173-303-665(6), WAC 173-303-806(4)(h)] to: Provide long-term minimization of migration of liquids through the closed landfill; Function with minimum maintenance; Promote drainage and minimize erosion or abrasion of the cover; Accommodate settling and subsidence so that the cover's integrity is maintained; and have a permeability less than or equal to the permeability of any bottom liner system or natural sub soils present.

III.11.C.1.c Compliance Schedule

Proposed conceptualized final cover design is presented in Chapter 11 (Closure and Financial Assurance). Six months prior to start of construction of IDF landfill final cover (but no later than 6 months prior to acceptance of the last shipment of waste at the IDF), the Permittees shall submit IDF landfill final cover design, specifications and CQA plan

- 1 to Ecology for review and approval. No construction of the final cover may proceed until
2 Ecology approval of the final design is given, through a permit modification.
- 3 III.11.C.1.d The Permittees shall notify Ecology at least sixty (60) calendar days prior to the date it
4 expects to begin closure of the IDF landfill in accordance with WAC 173-303-610(c).
- 5 III.11.C.2 Design Reports
- 6 III.11.C.2.a New Tank Design Assessment Report
- 7 Permittees shall generate a written report in accordance with WAC 173-303-640(3)(a),
8 providing the results of the leachate collection tank system design assessment. The report
9 shall be reviewed and certified by an Independent Qualified Registered Professional
10 Engineer (IQRPE) in accordance with WAC-173-303-810(13)(a).
- 11 [1] "Independent qualified registered professional engineer," as used here and elsewhere
12 with respect to Operating Unit 11, means a person who is licensed by the state of
13 Washington, or a state which has reciprocity with the state of Washington as defined in
14 RCW 18.43.100, and who is not an employee of the owner or operator of the facility for
15 which construction or modification certification is required. A qualified professional
16 engineer is an engineer with expertise in the specific area for which a certification is
17 given.
- 18 III.11.C.2.b Compliance Schedule
- 19 Permittees shall submit the leachate collection tank design assessment report to Ecology
20 along with the IQRPE certification, prior to construction of any part of the tank system
21 including ancillary equipment.
- 22 **III.11.D CONSTRUCTION REQUIREMENTS**
- 23 III.11.D.1 Construction Quality Assurance
- 24 III.11.D.1.a Ecology shall provide field oversight during construction of critical systems. In cases
25 where an Engineering Change Notice (ECN) and/or Non Conformance Report (NCR) is
26 required, Ecology and the Permittees shall follow steps for processing changes to the
27 approved design per Conditions III.11.D.1.d.i and III.11.D.1.d.ii.
- 28 III.11.D.1.b Permittees shall implement the Construction Quality Assurance Plan (CQA plan)
29 (Appendix 4B of the permit) during construction of IDF.
- 30 III.11.D.1.b.i The Permittees will not receive waste in the IDF until the owner or operator has submitted
31 to Ecology by certified mail or hand delivery a certification signed by the CQA officer
32 that the approved CQA plan has been successfully carried out and that the unit meets the
33 requirements of WAC 173-303-665 (2)(h) or (j); and the procedure in WAC 173-303-810
34 (14)(a) has been completed. Documentation supporting the CQA officer's certification
35 shall be furnished to Ecology upon request.
- 36 III.11.D.1.c Construction inspection reports
- 37 Permittees shall submit a report documenting the results of the leachate tank installation
38 inspection. This report must be prepared by an independent, qualified installation
39 inspector or a professional independent, qualified, registered, professional engineer either
40 of whom is trained and experienced in the proper installation of tank systems or
41 components. The Permittees will remedy all discrepancies before the tank system is
42 placed in use. This report shall be submitted to Ecology 90 days prior to IDF operation
43 and be included in the IDF Operating Record. [WAC-173-303-640(3)(h)].
- 44 III.11.D.1.d ECN/NCR Process for Critical Systems

Portions of the following conditions for processing engineering change notices and non-conformance reporting were extracted from and supersede Site Wide General Permit Condition II.L.

III.11.D.1.d.i Engineering Change Notice for Critical Systems

During construction of the IDF, the Permittees shall formally document changes to the approved designs, plans, and specifications, identified in Appendices 4A, 4B, 4C, and 4D of this permit, with an Engineering Change Notice (ECN). The Permittees shall maintain all ECNs in the IDF unit-specific Operating Record and shall make them available to Ecology upon request or during the course of an inspection. The Permittees shall provide to Ecology copies of proposed ECNs affecting any critical system within five (5) working days of initiating the ECN. Identification of critical systems is included in Condition III.11.C.1 and Appendix 4A of this permit. Within five (5) working days, Ecology will review a proposed ECN modifying a critical system and inform the Permittees whether the proposed ECN, when issued, will require a Class 1, 2, or 3 Permit modification.

III.11.D.1.d.ii Non-conformance Reporting for Critical Systems

III.11.D.1.d.ii.a During construction of the IDF, the Permittees shall formally document with a Nonconformance Report (NCR), any work completed which does not meet or exceed the standards of the approved design, plans and specifications, identified in Appendices 4A, 4B, 4C and 4D of this permit. The Permittees shall maintain all NCRs in the IDF unit-specific Operating Record and shall make them available to Ecology upon request, or during the course of an inspection.

III.11.D.1.d.ii.b The Permittees shall provide copies of NCRs affecting any critical or regulated system to Ecology within five (5) working days after identification of the nonconformance. Identification of critical systems is included in Condition III.11.C.1 and Appendix 4A of this permit. Ecology will review a NCR affecting a critical system and notify the Permittees within five (5) working days, in writing, whether a Permit modification is required for any nonconformance, and whether prior approval is required from Ecology before work proceeds, which affects the nonconforming item.

III.11.D.1.d.iii As-Built Drawings

Upon completing construction of IDF, the Permittees shall produce as-built drawings of the project, which incorporate the design and construction modifications resulting from all project ECNs and NCRs, as well as modifications made pursuant to WAC 173-303-830. The Permittees shall place the drawings into the Operating Record within twelve (12) months of completing construction.

III.11.D.2 The Permittees shall not reduce the minimum frequency of destructive testing less than one test per 500 feet of seam, without prior approval in writing from Ecology

III.11.E GROUND WATER AND GROUND WATER MONITORING

Ground water shall be monitored in accordance with WAC 173-303 and the provisions contained in the Ecology-approved facility ground water monitoring plan (Chapter 5.0). All wells used to monitor the ground water beneath the unit shall be constructed in accordance with the provisions of WAC-173-160.

- 1 III.11.E.1 Ground Water Monitoring Program
- 2 III.11.E.1.a Prior to initial waste placement in the IDF landfill, the Permittees shall sample all ground
3 water monitoring wells in the IDF network twice quarterly for one first year to determine
4 baseline conditions. For the first sampling event (and only the first), samples for each
5 well will include all constituents in 40 CFR 264 Appendix IX. Thereafter, sampling will
6 include only those constituents as specified in Chapter 5.0, Table 5-2: chromium (filtered
7 and unfiltered the first year to compare results), specific conductance, TOC, TOX, and
8 pH. Other constituents to be monitored but not statistically compared include alkalinity,
9 anions, ICP metals, and turbidity. These will provide important information on
10 hydrogeologic characteristics of the aquifer and may provide indications of encroaching
11 contaminants from other facilities not associated with IDF.
- 12 III.11.E.1.b After the baseline monitoring is completed, and data is analyzed, the Permittees and
13 Ecology shall assess revisions to Chapter 5.0, Table 5-2. Subsequent samples will be
14 collected semi-annually and will include constituents listed in Table 5-2 as approved by
15 Ecology. All data analysis will employ Ecology approved statistical methods pursuant to
16 WAC 173-303-645. Changes to Chapter 5.0 will be subject to the permit modification
17 procedures under WAC 173-303-830.
- 18 III.11.E.1.c All constituents used as tracers to assess performance of the facility through computer
19 modeling should be sampled at least annually to validate modeling results. Groundwater
20 monitoring data and analytes to be monitored will be reviewed periodically as defined in
21 Chapter 5.0 of this permit.
- 22 III.11.E.1.d Upon Ecology approval of the leachate monitoring plan, leachate monitoring and
23 groundwater monitoring activities should be coordinated as approved by Ecology to form
24 an effective and efficient means of monitoring the performance of the IDF facility.
- 25 III.11.E.1.e Ground water monitoring data shall be reported to Ecology on an annual basis beginning
26 on March 1 after the issue date of this permit and annually on March 1 after that.
- 27 **III.11.F LEACHATE COLLECTION COMPONENT MANAGEMENT**
- 28 Permittees shall design, construct, and operate all leachate collection systems to minimize
29 clogging during the active life and post closure period
- 30 III.11.F.1 Leachate Collection and Removal System (LCRS)
- 31 III.11.F.1.a At least 120 days prior to initial waste placement in the IDF, the Permittees shall submit a
32 Leachate monitoring plan to Ecology for review, approval, and incorporation into the
33 permit. Upon approval by Ecology, this plan will be incorporated into the Permit as a
34 class 1' modification. The Permittees shall not accept waste into the IDF until the
35 requirements of the leachate monitoring plan have been incorporated into this permit.
- 36 III.11.F.1.b Leachate in the LCRS (primary sump) shall be sampled and analyzed monthly for the first
37 year of operation of the facility and quarterly thereafter (pursuant to WAC 173-303-200).
38 Additionally, leachate shall be sampled and analyzed to meet waste acceptance criteria at
39 the receiving treatment storage and disposal facility.
- 40 III.11.F.1.c Permittees shall manage the leachate in the LCRS system in a manner that does not allow
41 the fluid head to exceed 30.5 cm above the flat 50-foot by 50-foot LCRS sump HDPE
42 bottom liner except for rare storm events as discussed in Chapter 4.0, Section 4.3.6.1 and
43 the LCRS sump trough [(WAC 173-303-665(2)(h)(ii)(B). Liquid with a depth greater
44 than 30.5 cm above the SLDS liner will be removed at the earliest practicable time after
45 detection (not to exceed 5 working days).

- 1 III.11.F.1.d After initial waste placement, Permittees shall manage all leachate from the permitted cell
2 as dangerous waste (designated with Dangerous Waste Number F039) in accordance with
3 WAC 173- 303.
- 4 III.11.F.2 Monitoring and Management of Leak Detection System (LDS/ secondary sump)
- 5 III.11.F.2.a Permittees shall manage the leachate in the LDS system in a manner that does not allow
6 the fluid head to exceed 30.5 cm above the LDS liner (WAC 173-303-665(2)(h)(ii)(B).
- 7 III.11.F.2.b Permittees shall monitor and record leachate removal for comparison to the Action
8 Leakage Rate (ALR) as described in Appendix 4C, Response Action Plan. If the leachate
9 flow rate in the LDS exceeds the ALR, the Permittees shall implement the Ecology
10 approved response action plan (Appendix 4C).
- 11 III.11.F.2.c Leachate from the LDS (secondary sump) shall be sampled semi-annually if a pumpable
12 quantity of leachate is available for sampling.
- 13 III.11.F.2.d Accumulated liquid of pumpable quantities in the LDS will be managed in a manner that
14 does not allow the fluid head to exceed 30.5 cm above the LDS liner
15 [WAC 173-303-665(2)(h)(i)(C)(iii)]. Liquid with a depth greater than 30.5 cm above the
16 LDS liner will be removed at the earliest practicable time after detection (not to exceed
17 5 working days).
- 18 III.11.F.3 Monitoring and Management of the Secondary Leak Detection System (SLDS)
- 19 III.11.F.3.a At least 180 days prior to initial waste placement, the, the Permittees shall submit to
20 Ecology for approval a sub-surface liquids monitoring and operations plan (SLMOP) for
21 the SLDS to include the following: monitoring frequency, pressure transducer
22 configuration, liquid collection and storage processes, sampling and analysis and response
23 actions. The SLMOP shall be approved by Ecology prior to placement of waste in the
24 IDF, and incorporated into the Permit as a Class 1' modification.
- 25 III.11.F.3.b Permittees shall monitor and manage the SLDS (tertiary sump) pursuant to the approved
26 sub-surface liquids monitoring and operations plan.
- 27 III.11.F.3.c Accumulated liquid of pumpable quantities in the SLDS will be managed in a manner that
28 does not allow the fluid head to exceed 30.5 cm above the SLDS liner
29 [WAC 173-303-665(2)(h)(i)(C)(iii)]. Liquid with a depth greater than 30.5 cm above the
30 SLDS liner will be removed at the earliest practicable time after detection (not to exceed
31 5 working days).
- 32 III.11.F.3.d After initial waste placement, permittees shall manage all leachate from the permitted cell
33 as dangerous waste in accordance with WAC 173- 303.
- 34 **III.11.G CONSTRUCTION WATER MANAGEMENT**
- 35 III.11.G.1 During construction, it is anticipated that liquids will accumulate on top of all liners and
36 sumps. Permittees shall manage the construction wastewater in accordance with State
37 Waste Discharge Permit ST 4511.
- 38 III.11.G.2 Liquid accumulation within the LCRS, LDS, and SLDS prior to initial waste placement
39 will be considered construction wastewater (i.e., not leachate).
- 40 **III.11.H LANDFILL LINER INTEGRITY MANAGEMENT & LANDFILL OPERATIONS**
- 41 III.11.H.1 Permittees shall design, construct, and operate the landfill in a manner to protect the liners
42 from becoming damaged. Temperature: Waste packages with elevated temperatures shall
43 be evaluated and managed in a manner to maintain the primary (upper) liner below the
44 design basis temperature for the liner (e.g., 160 F). Weight: Waste, fill material and

closure cover shall be placed in a manner that does not exceed the allowable load bearing capacity of the liner (weight per area 13,000 lb/ft²). Puncture: At least 3 feet of clean backfill material shall be placed as an operations layer over the leachate collection and removal system to protect the system from puncture damage.

III.11.H.1.a All equipment used for construction and operations inside of the IDF shall meet the weight limitation as specified in condition III.H.1. Only equipment that can be adequately supported by the operations layer as specified in condition III.H.1 (e.g., will not have the potential to puncture the liner) shall be used inside of the IDF. All equipment used for construction and operations outside of the IDF shall not damage the berms. Changes to any equipment will follow the process established by condition II.R of the site wide permit. Within 120 days from the effective date is-for the permit, a process for demonstrating compliance with this condition shall be submitted for review by Ecology. This process will be incorporated into appropriate IDF operating procedures prior to IDF operations.

III.11.H.2 The Permittees shall construct berms and ditches to prevent run-on and run-off in accordance with the requirements of Section 4.3.8 of this permit. Before the first placement of waste in the IDF, the Permittees shall submit to Ecology a final grading and topographical map on a scale sufficient to identify berms and ditches used to control run-on and run-off. Upon approval, Ecology will incorporate these maps into the permit as a class 1' modification.

III.11.H.3 The Permittees shall operate the RCRA IDF Cell (Cell1) in accordance with WAC 173-303-665(2) and the operating practices described in Chapters 3, 4, 6, 7, 8 and Appendix 4A, Section 1, subsection 7, except as otherwise specified in this Permit.

III.11.H.4 The Permittees shall maintain a permanent and accurate record of the three-dimensional location of each waste type, based on grid coordinates, within the RCRA IDF Cell (Cell1) in accordance with WAC 173-303-665(5).

~~III.11.H.5 The Permittees shall inspect the landfill in accordance with WAC 173-303-665(4)(b) and Chapter 6.0 of this permit, except as otherwise specified in this Permit-Reserved~~

III.11.I WASTE ACCEPTANCE CRITERIA

The only acceptable waste form approved for disposal at the RCRA cell of IDF are IDF operational waste, Immobilized Low Activity Waste (ILAW) in glass form from the Waste Treatment Plant (WTP) Low Activity Waste (LAW) Vitrification facility and ILAW from the Bulk Vitrification Research Demonstration and Development facility (up to 50 boxes). Specifics about waste acceptance criteria for each of these wastes are detailed below.

No other waste forms may be disposed at the RCRA cell of IDF unless authorized via a Final Permit modification decision request. Requests for Permit modifications must be accompanied by an analysis adequate for Ecology to comply with SEPA, as well as by a risk assessment and groundwater modeling to show the environmental impact. Permit Condition III.11.I.65 outlines the process by which waste sources in the IDF are modeled in an ongoing risk budget and a ground water impact analysis.

- 1 III.11.I.1 Six months prior to IDF operations Permittees shall submit to Ecology for review,
2 approval, and incorporation into the permit, all waste acceptance criteria (WAC) to
3 address, at a minimum, the following: physical/chemical criteria, liquids and liquid
4 containing waste, land disposal restriction treatment standards and prohibitions,
5 compatibility of waste with liner, gas generation, packaging, handling of packages,
6 minimization of subsidence.
- 7 III.11.I.1.a All containers/packages shall meet void space requirements pursuant to
8 WAC 173-303-665(12).
- 9 III.11.I.1.b Compliance Schedule
- 10 III.11.I.1.b.i Six months prior to IDF operations, the Permittees shall submit to Ecology for review,
11 approval, and incorporation into the permit any necessary modifications to the IDF WAP
12 Waste Acceptance Plan (Appendix 3A of the permit application, DOE/RL-2003-12, Rev
13 1).
- 14 III.11.I.2 ILAW Waste Acceptance Criteria
- 15 The only ILAW forms acceptable for disposal at IDF are: (1) approved glass canisters
16 that are produced in accordance with the terms, conditions, and requirements of the WTP
17 portion of the Permit, and (2) the 50 bulk vitrification test boxes as specified in the DBVS
18 test plans.
- 19 To assure protection of human health and the environment, it is necessary that the
20 appropriate quality of glass be disposed at IDF. The LDR Treatment Standard for eight
21 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver), when
22 associated with High Level Waste, is HLWIT (40 CFR 268). Because these metals are
23 constituents in the Hanford Tanks Waste, the LDR standard for ILAW disposed to IDF is
24 HLWIT.
- 25 For any ILAW glass form(s) that DOE intends to dispose of in IDF, DOE will provide to
26 Ecology for review, an ILAW Waste Form Technical Requirements Document (IWTRD).
27 The IWTRD will contain:
- 28 III.11.I.2.a WTP ILAW Waste Acceptance Criteria
- 29 III.11.I.2.a.i A description of each specific glass formulation that DOE intends to use including a basis
30 for why each specific formulation is proposed for use, which specific tank wastes the
31 glass formulation is proposed for use with, the characteristics of the glass that are key to
32 satisfactory performance (e.g., VHT, PCT, and TCLP and/or other approved performance
33 testing methodologies that the parties agree are appropriate and necessary), the range in
34 key characteristics anticipated if the specific glass formulation is produced on a
35 production basis with tank waste, and the factors that DOE must protect against in
36 producing the glass to ensure the intended glass characteristics will exist in the actual
37 ILAW.
- 38 III.11.I.2.a.ii A performance assessment that provides a reasonable basis for assurance that each glass
39 formulation will, once disposed of in IDF in combination with the other waste volumes
40 and waste forms planned for disposal at the entire Integrated Disposal Facility, be
41 adequately protective of human health and the environment; and will not violate or be
42 projected to violate all applicable state and federal laws, regulations and environmental
43 standards.
- 44 Within 30 60 days of a request by Ecology, the Permittees shall provide a separate model
45 run using Ecology's assumptions and model input.

- 1 III.11.I.2.a.iii A description of production processes including management controls and quality
2 assurance/quality control requirements that assure that glass produced for each
3 formulation will perform in a reasonably similar manner to the waste form assumed in the
4 performance assessment for that formulation.
- 5 III.11.I.2.a.iv The Permittees shall update the IWTRD consistent with the above requirements for
6 review by Ecology consistent with their respective roles and authority as provided under
7 the TPA. Ecology comments shall be dispositioned through the Review Comment Record
8 (RCR) process and will be reflected in further modeling to modify the IDF ILAW waste
9 acceptance as appropriate. The initial IWTRD shall contain glass formulation data as
10 required by III.11.I.2.a.i, and shall be submitted no later than January, 2007, or if later
11 than this date, as agreed to by Ecology. The performance assessment required by
12 III.11.I.2.a.ii, and the quality assurance/quality control requirements process required by
13 III.11.I.2.a.iii shall be submitted for Ecology review as soon as possible after issuance of
14 the Final Tank Closure and Waste Management EIS, and at least 180 days prior to the
15 date DOE expects to receive waste at IDF, but in no case later than July, 2010 (or a later
16 date if agreed to by Ecology). At a minimum, the Permittees shall submit updates to the
17 IWTRD to Ecology every five years or more frequently if either of the following
18 conditions exist:
- 19 • The Permittees submits a permit modification request allowing additional waste forms
20 to be disposed of at IDF,
 - 21 • The WTP of other vitrification facility change their glass formulations from those
22 previously included in the ITRWD.
- 23 III.11.I.2.a.v The Permittees shall not dispose of any WTP ILAW not described and evaluated in the
24 IWTRD.
- 25 III.11.I.3 ILAW Waste Acceptance Criteria Verification
- 26 III.11.I.3.a Six months prior to disposing of ILAW in the IDF, the Permittees will submit an ILAW
27 verification plan to Ecology for review and approval. This plan will be coordinated with
28 WTP, Ecology, and the Permittees personnel. This plan will outline the specifics of
29 verifying ILAW waste acceptance through WTP operating parameters, and/or glass
30 sampling. The Plan will include physical sampling requirements for batches, glass
31 formulations, and/or feed envelopes.
- 32 III.11.I.4 Demonstration Bulk Vitrification System (DBVS) Bulk Vitrification Waste Acceptance
33 Criteria
- 34 III.11.I.4.a Bulk Vitrification waste forms that are acceptable to be disposed of at IDF are up to
35 50 boxes of vitrified glass produced pursuant to the DBVS RD&D Permit from processing
36 Hanford Tank S-109 tank waste.
- 37 III.11.I.4.b If Bulk Vitrification is selected as a technology to supplement the Waste Treatment Plant,
38 the IDF portion of the Permit will need to be modified to accept Bulk Vitrification Full
39 Scale production waste forms. This modification will need to be accompanied by
40 appropriate TPA changes (per M-062 requirements) and adequate risk assessment
41 information sufficient for the Department of Ecology to meet its SEPA obligations.
- 42 III.11.I.4.c DBVS Waste Acceptance Verification will occur on 100% of the waste packages.
43 Pursuant to the DBVS RD&D Permit, a detailed campaign test report will be produced
44 and submitted to Ecology detailing results of all testing performed on each waste package
45 that is produced. IDF personnel shall review these reports to verify that the waste
46 packages meet IDF Waste Acceptance Criteria.

- 1 III.11.I.4.d The Permittees shall not dispose of any waste forms that do not comply with all
2 appropriate and applicable treatment standards, including all applicable Land Disposal
3 Restrictions (LDR).
- 4 III.11.I.5 Modeling – Risk Budget Tool
- 5 III.11.I.5.a The Permittees must create and maintain a modeling - risk budget tool, which models the
6 future impacts of the planned IDF waste forms (including input from analysis performed
7 as specified in conditions III.11.I.2.a through III.11.I.2.a.ii above) and their impact to
8 underlying vadose and ground water. This model will be submitted for Ecology review as
9 soon as possible after issuance of Final Tank Closure and Waste Management EIS, and at
10 least 180 days prior to the date DOE expects to receive waste at IDF but in no case later
11 than July 2010 (or a later date if agreed to by Ecology). The model shall be updated at
12 least every 5 years. ~~This model will be updated at least every 5 years beginning no more~~
13 ~~than one year after the issuance date of this permit and provided to Ecology for review.~~
14 The model will be updated more frequently if needed, to support permit modifications or
15 SEPA Threshold Determinations whenever a new waste stream or significant expansion is
16 being proposed for the IDF. This modeling-risk budget tool shall be conducted in manner
17 that is consistent with state and federal requirements, and represents a cumulative risk
18 analysis of all waste previously disposed of in the entire IDF (both cell 1 and cell 2) and
19 those wastes expected to be disposed of in the future for the entire IDF. The groundwater
20 impact should be modeled in a concentration basis and should be compared against
21 various performance standards including but not limited to drinking water standards (40
22 CFR 141 and 40 CFR 143). Ecology will review modeling assumptions, input
23 parameters, and results and will provide comments to the Permittees. Ecology comments
24 shall be dispositioned through the Review Comment Record (RCR) process and will be
25 reflected in further modeling to modify the IDF ILAW waste acceptance as appropriate.
- 26
- 27 EPA Rational: Add language clarifying the period of applicability of this condition, and conforming
28 changes to model update submissions.

- 1 III.11.I.5.a.i The modeling-risk budget tool will include a sensitivity analysis reflecting parameters and
2 changes to parameters as requested by Ecology.
- 3 III.11.I.5.a.ii If these modeling efforts indicate results within 75% of a performance standard [including
4 but not limited to federal drinking water standards (40 CFR 141 and 40 CFR 143)],
5 Ecology and the Permittees will meet to discuss mitigation measures or modified waste
6 acceptance criteria for specific waste forms.
- 7 III.11.I.5.a.iii When considering all the waste forms to be disposed of in IDF, the Permittees shall not
8 dispose of any waste that will result (through forward looking modeling or in real
9 groundwater concentrations data) in a violation of any state or federal regulatory limit,
10 specifically including but not limited to drinking water standards for any constituent as
11 defined in 40 CFR 141 and 40 CFR 143.
- 12 III.11.I.6 The Permittees shall not dispose of any waste that is not in compliance with state and
13 federal requirements as identified in Chapter 13.0.
- 14 III.11.I.6.a In accordance with DOE's authority under the Atomic Energy Act of 1954, as amended
15 and other applicable law, prior to disposing of any mixed immobilized low-activity waste
16 (ILAW) in the IDF, DOE will certify to the State of Washington that it has determined
17 that such ILAW is not high-level waste and meets the criteria and requirements outlined
18 in DOE's consultation with the U.S. Nuclear Regulatory Commission beginning in 1993
19 (Letter from R.M. Bernero, USNRC to J. Lytle, USDOE, dated March 2, 1993; Letter
20 from J. Kinzer, USDOE, to C. J. Paperiello, USNRC, Classification of Hanford Low-
21 Activity Tank Waste Fraction, dated March 7, 1996; and Letter from C.J. Paperiello,
22 USNRC, to J. Kinzer, USDOE, Classification of Hanford Low-Activity Tank Waste
23 Fraction, dated June 9, 1997). While the requirement to provide such certification is an
24 enforceable obligation of this permit, the provision of such certification does not convey,
25 or purport to convey, authority to Ecology to regulate the radioactive hazards of the waste
26 under this permit.
- 27 III.11.I.7 IDF Operational Waste Acceptance Criteria
- 28 IDF operational activities (including decontamination, cleanup, and maintenance) will
29 generate a small amount of waste. Waste that can meet IDF waste acceptance without
30 treatment will be disposed of at the IDF. All other IDF operational waste will be managed
31 pursuant to WAC 173-303-200.
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Integrated Disposal Facility

Operating Unit 11, of the Hanford Facility's *Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste* (WA7890008967).

Chapter 6.0

PAGE REVISION LOG

Chapter 6.0 Revision and Date	Pages Replaced	Change Description	Ecology Approval Date
Revision 1.0 November 21, 2007	Replaced all pages	Modifications required to put IDF into Pre-Active Life Operating mode.	November 21, 2007

Notes

- 1) Insert this log sheet before the Table of Contents.
- 2) Insert the revised pages in the appropriate places in the IDF Permit.

This section has been identified as
"Official Use Only" (OUO)
and is available to view by appointment at
the Nuclear Waste Program
Resource Center
3100 Port of Benton
Richland, Washington.

Please contact Valarie Peery at
(509) 372-7920
for a viewing appointment.

Integrated Disposal Facility

Operating Unit 11, of the Hanford Facility's *Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste* (WA7890008967).

Chapter 7.0

PAGE REVISION LOG

Chapter 7.0 Revision and Date	Pages Replaced	Change Description	Ecology Approval Date
Revision 1.0 November 21, 2007	Replaced all pages	Modifications required to put IDF into Pre-Active Life Operating mode.	November 21, 2007

Notes

- 1) Insert this log sheet before the Table of Contents.
- 2) Insert the revised pages in the appropriate places in the IDF Permit.

PART III UNIT-SPECIFIC CONDITIONS FOR FINAL STATUS OPERATIONS**OPERATING UNIT 11****Integrated Disposal Facility****Chapter 7.0****Contingency Plan**

7.0	CONTINGENCY PLAN [G].....	11.7-7.1
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Table

Table 7-1.	Hanford Facility Documents Containing Contingency Plan Requirements of	
WAC 173-303-350(3) For Pre-Active Life.....		11.7-7.3
Table 7-1A	Hanford Facility Documents Containing Contingency Plan Requirements of	
WAC 173-303-350(3) For Active Life.....		11.7-7.5

Appendix

7A	PRE-ACTIVE LIFE BUILDING EMERGENCY PLAN FOR THE INTEGRATED DISPOSAL	
FACILITY.....		APP 7A
7B	ACTIVE LIFE BUILDING EMERGENCY PLAN FOR THE INTEGRATED DISPOSAL	
FACILITY.....		APP 7B

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7.0 CONTINGENCY PLAN [G]

The requirements in this chapter that address activities involving the receipt and disposal of dangerous waste as defined in WAC 173-303-040 shall be applied during the "Active Life" of the IDF. "Active life" of a facility means the period from the initial receipt of dangerous waste at the facility until the department receives certification of final closure (WAC 173-303-040). The requirements of this chapter that do not apply to receipt and disposal of dangerous waste as defined in WAC 173-303-040, shall be implemented by the Permittees during the "Pre-Active Life" of IDF. "Pre-Active Life" is not defined in the regulations, but refers to the facility maintenance period between final construction and the start of active life.

The applicable WAC 173-303 requirements for a contingency plan are satisfied in the following documents: portions of the *Hanford Emergency Management Plan* [Attachment 4 of the HF RCRA Permit (DW Portion)] and portions of the *Building Emergency Plan for the Integrated Disposal Facility* (Appendix 7A).

The unit-specific building emergency plan also serves to satisfy a broad range of other requirements [e.g., Occupational Safety and Health Administration standards (29 CFR 1910), *Toxic Substance Control Act of 1976* (40 CFR 761) and U.S. Department of Energy Orders]. Therefore, revisions made to portions of this contingency plan document that are not governed by the requirements of WAC 173-303 will not be considered as a modification subject to WAC 173-303-830 or HF RCRA Permit (DW Portion) Condition I.C.3.

Table 7-1 identifies which portions of the building emergency plan are written to meet applicable WAC 173-303 contingency plan requirements during the pre-active life phase. Once the IDF begins to receive dangerous waste, the requirements in Table 7-1 are no longer applicable, and requirements will be as provided in Table 7-1A. In addition to the building emergency plan portions identified in Tables 7-1 and 7-1A, Section 12.0 of the building emergency plan is written to meet WAC 173-303 requirements identifying where copies of the *Hanford Emergency Management Plan* and the building emergency plan are maintained on the Hanford Facility. Therefore, revisions to Section 12.0 and the portions identified in Table 7-1 and 7-1A are considered a modification subject to WAC 173-303-830 or the HF RCRA Permit (DW Portion), Condition I.C.3.

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Table 7-1. Hanford Facility Documents Containing Contingency Plan Requirements of
WAC 173-303-350(3) for Pre-Active Life

Requirement	Hanford Emergency Management Plan (DOE/RL-94-02): Attachment 4 of the HF RCRA Permit (DW Portion)	Building Emergency Plan ¹ (<i>RPP-22957</i>)
-350(3)(a) - A description of the actions which facility personnel must take to comply with this section and WAC 173-303-360.	N/A	N/A
-350(3)(b) - A description of the actions which shall be taken in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to the public health and the environment, arrives at the facility, and is not acceptable to the owner or operator, but cannot be transported pursuant to the requirements of WAC 173-303-370(5), Manifest system, reasons for not accepting dangerous waste shipments.	N/A	N/A
-350(3)(c) - A description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services as required in WAC 173-303-340(4).	X Sections 3.2.3, 3.3.1, 3.3.2, 3.4, 3.4.1.1, 3.4.1.2, 3.4.1.3, 3.7, and Table 3-1	
-350(3)(d) - A current list of names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency coordinator required under WAC 173-303-360(1). Where more than one person is listed, one must be named as primary emergency coordinator, and others must be listed in the order in which they will assume responsibility as alternates. For new facilities only, this list may be provided to the department at the time of facility certification (as required by WAC 173-303-810 (14)(a)(I)), rather than as part of the permit application.	X Section 2.2.1.1.1	X ² Section 3.1, 13.0
-350(3)(e) - A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.	X Hanford Fire Department: Appendix C	X Section 9.0

Table 7-1. Hanford Facility Documents Containing Contingency Plan Requirements of
WAC 173-303-350(3) for Pre-Active Life

Requirement	Hanford Emergency Management Plan (DOE/RL-94-02): Attachment 4 of the HF RCRA Permit (DW Portion)	Building Emergency Plan ¹ (<i>RPP-22957</i>)
-350(3)(f) - An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.	X ³ Figure 7-3 and Table 5-1	X ⁴ Section 1.5

N/A (Not Applicable During the "Pre-active Life phase")

An 'X' indicates requirement applies.

¹ Portions of the *Hanford Emergency Management Plan* not enforceable through Appendix A of that document are not made enforceable by reference in the building emergency plan.

² Emergency Coordinator names and home telephone numbers are maintained separate from any contingency plan document, on file in accordance with HF RCRA Permit (DW Portion) General Condition II.A.4. and are updated, at a minimum, monthly.

³ The Hanford Facility (sitewide) signals are provided in this document. No unit/building signal information is required unless unique devices are used at the unit/building.

⁴ An evacuation route for the TSD unit must be provided. Evacuation routes for occupied buildings surrounding the TSD unit are provided through information boards posted within buildings.

Table 7-1A. Hanford Facility Documents Containing Contingency Plan Requirements of
WAC 173-303-350(3) for Active Life

Requirement	Hanford Emergency Management Plan (DOE/RL-94-02): Attachment 4 of the HF RCRA Permit (DW Portion)	Building Emergency Plan ¹ (<i>RPP-22957</i>)
-350(3)(a) - A description of the actions which facility personnel must take to comply with this section and WAC 173-303-360.	X ² Section 1.3.4	X ² Sections 7.1, 7.2 through 7.2.5, and 7.3 ³ Sections 4.0, 8.2, 8.3, 8.4, 11.0
-350(3)(b) - A description of the actions which shall be taken in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to the public health and the environment, arrives at the facility, and is not acceptable to the owner or operator, but cannot be transported pursuant to the requirements of WAC 173-303-370(5), Manifest system, reasons for not accepting dangerous waste shipments.	X ² Section 1.3.4	X ^{2,4} Section 7.2.5.1
-350(3)(c) - A description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services as required in WAC 173-303-340(4).	X Sections 3.2.3, 3.3.1, 3.3.2, 3.4, 3.4.1.1, 3.4.1.2, 3.4.1.3, 3.7, and Table 3-1	
-350(3)(d) - A current list of names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency coordinator required under WAC 173-303-360(1). Where more than one person is listed, one must be named as primary emergency coordinator, and others must be listed in the order in which they will assume responsibility as alternates. For new facilities only, this list may be provided to the department at the time of facility certification (as required by WAC 173-303-810 (14)(a)(I)), rather than as part of the permit application.		X ⁵ Section 3.1, 13.0
-350(3)(e) - A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.	X Hanford Fire Department: Appendix C	X Section 9.0

Table 7-1A. Hanford Facility Documents Containing Contingency Plan Requirements of
WAC 173-303-350(3) for Active Life

Requirement	Hanford Emergency Management Plan (DOE/RL-94-02): Attachment 4 of the HF RCRA Permit (DW Portion)	Building Emergency Plan ¹ (<i>RPP-22957</i>)
-350(3)(f) - An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.	X ⁶ Figure 7-3 and Table 5-1	X ⁷ Section 1.5

An 'X' indicates requirement applies.

¹ Portions of the *Hanford Emergency Management Plan* not enforceable through Appendix A of that document are not made enforceable by reference in the building emergency plan.

² The *Hanford Emergency Management Plan* contains descriptions of actions relating to the Hanford Site Emergency Preparedness System. No additional description of actions are required at the site level. If other credible scenarios exist or if emergency procedures at the unit are different, the description of actions contained in the building emergency plan will be used during an event by a building emergency director.

³ Sections 7.1, 7.2 through 7.2.5, and 7.3 of the building emergency plan are those sections subject to the Class 2 "Changes in emergency procedures (i.e., spill or release response procedures)" described in WAC 173-303-830, Appendix I Section B.6.a.

⁴ This requirement only applies to TSD units that receive shipments of dangerous or mixed waste defined as offsite shipments in accordance with WAC 173-303.

⁵ Emergency Coordinator names and home telephone numbers are maintained separate from any contingency plan document, on file in accordance with HF RCRA Permit (DW Portion) General Condition II.A.4. and are updated, at a minimum, monthly.

⁶ The Hanford Facility (sitewide) signals are provided in this document. No unit/building signal information is required unless unique devices are used at the unit/building.

⁷ An evacuation route for the TSD unit must be provided. Evacuation routes for occupied buildings surrounding the TSD unit are provided through information boards posted within buildings.

Integrated Disposal Facility

Operating Unit 11, of the Hanford Facility's *Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste* (WA7890008967).

Appendix 7A

PAGE REVISION LOG

Appendix 7A Revision and Date	Pages Replaced	Change Description	Ecology Approval Date
Revision 0 November 21, 2007	New Appendix	Requirements for Pre-Active Life Operating mode.	November 21, 2007

Notes

- 1) Insert this log sheet before the Table of Contents.
- 2) Insert the revised pages in the appropriate places in the IDF Permit.

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Integrated Disposal Facility

Operating Unit 11, of the Hanford Facility's *Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste* (WA7890008967).

Appendix 7B

PAGE REVISION LOG

Appendix 7B Revision and Date	Pages Replaced	Change Description	Ecology Approval Date
Revision 0 November 21, 2007	New Appendix	Requirements for Active Life Operating mode.	November 21, 2007

Notes

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